

### **REMARKS**

Claims 1-29 and 33-61 are pending in this application, of which claims 1, 19, 33 and 51 are independent. Claims 1-8, 10-14, 17-21, 27-29, 33-40, 42-46, 49-53 and 59-61 have been amended. Support for amendments can be found throughout the Specification and at least at page 7, lines 4-19 and Figure 2. No new matter has been added. Applicants submit that all of the pending claims are in condition for allowance. Applicants respectfully request reconsideration of the outstanding rejections and allowance of all pending claims in view of the remarks included herein.

#### **I. Interview with the Examiner**

Applicants thank the Examiner for the courtesy of extending an interview on November 20, 2008. During the interview Applicants explained the claimed invention and presented their position that the teachings of the cited references cannot be combined in a reasonable manner so as to disclose or suggest all features of the pending claims. Specifically, Applicants' representatives asserted that the models of Wang are mere flowcharts and are not *executable* models. Applicants' representatives further explained that the model components of Wang are not *time-based* components. Therefore, combining the timing loop of Kornerup and the graphical model of Wang do not result in an executable time-based component because the components of Wang merely indicate medical data, such as a first dosage administered to a patient. The medical data of Wang will be the same, for example, at time  $t=0$  and  $t=10$ . Applicants' representatives also explained that Courant, cited by the Examiner for displaying an executable model, does not concern executable block diagrams with executable time-based components. In light of the Applicants' explanation of the claimed invention and teachings of Wang, Courant and Kornerup, the Examiner suggested that Applicants amend the claims to better claim the invention.

#### **II. Claim Rejections under 35 U.S.C. § 103(a)**

Claims 1-29 and 33-61 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/0260700 by Wang et al. (hereafter "Wang") in view of U.S. Patent No. 5,522,073 to Courant et al. (hereafter "Courant") in further view of U.S.

Patent Application Publication No. 2005/0055666 by Kornerup et al. (hereafter “Kornerup”)  
(Office Action, page 2).

1. Claims 1-18 and 33-50

Claim 1 recites:

“A method for controlling model execution in a graphical modeling environment, the method comprising:

displaying a view of **an executable graphical model with a plurality of executable time-based components, said executable graphical model including at least one user-configurable, executable graphical post component having at least one input port for receiving at least one input signal, said executable graphical post component being configured to post an event when a condition associated with the at least one input signal of the executable graphical post component is satisfied;**

identifying when said condition is satisfied during execution of said executable graphical model;

posting, using said executable graphical post component, said notice of an occurrence of said event in said graphical modeling environment to an event handler, said posting notifying said event handler of said occurrence of said event; and

**executing at least one executable time-based component from said plurality of executable time-based components in response to said notifying as opposed to in response to a time trigger.”**

A. The executable graphical post component:

Wang, Courant, and Kornerup, alone or in any reasonable combination, fail to disclose or suggest all of the features of claim 1. For example, Wang, Courant, and Kornerup do not disclose or suggest an **executable graphical model including at least one user-configurable, executable graphical post component having at least one input port for receiving at least one input signal, said executable graphical post component being configured to post an event when a condition associated with the at least one input signal of the executable graphical post component is satisfied**, as recited in amended claim 1.

i. The Wang Reference

Applicants respectfully note that the Examiner cites claim language that differs from the language of Applicants’ claim 1. The Examiner asserts that Wang teaches *at least one model*

*with a plurality of executable time-based components.* See Office Action, page 2. Applicants respectfully disagree.

Wang does not disclose or suggest *executable time-based components*. Wang discusses a graphical user interface (GUI) for a clinical guideline system. See Figures 5-27. The clinical guideline of Wang provides the healthcare provider with information about patient history, dosage of drugs administered and recommended course of action based on patient history. See [0005]. The graphical icons on Wang's GUI merely indicate a dosage or a recommended action. These components are not time-based components. The dosage information indicated by a component on the GUI is a static information, i.e. it will be the same at time  $t=0$  or at time  $t=10$ . The recommendation provided to the healthcare provider using the teachings of Wang will not change with time. The recommendation is made based on the available information, i.e. a specific amount of components that appear on the GUI at a given time. In contrast, claim 1 recites executable time-based components. Time-based components may change value with time and hence are dynamic components, i.e. the component may have a different value at time  $t=0$  and at time  $t=10$ . Furthermore, the time-based components recited in Applicants' claim 1 are executable. Wang is silent about executable time-based components. Applicants amend claim 1 to further clarify that the graphical model is executable. Wang does not disclose or suggest *an executable graphical model with a plurality of executable time-based components*, as recited in Applicants' claim 1.

As correctly stated by the Examiner, Wang does not teach a graphical post component, as recited in claim 1 (Office Action, page 3). The Examiner cites to Courant for the teaching of a graphical post component. Applicants respectfully disagree.

#### ii. The Courant Reference

Courant fails at curing the shortcomings of Wang with respect to **executable graphical post component having at least one input port for receiving at least one input signal, said executable graphical post component being configured to post an event when a condition associated with the at least one input signal of the executable graphical post component is satisfied**, as recited in amended claim 1.

The Examiner does not indicate which component of Courant he deems equivalent to the graphical post component recited in Applicants' claim 1 and missing from Wang. *See* Office Action, page 3. Applicants assume that the Examiner asserts that the message connector of Courant is equivalent to the graphical post component recited in claim 1. In this case, Applicants respectfully note that the message connector of Courant is not **configured to post an event when a condition associated with the at least one input signal of the executable graphical post component is satisfied**, as recited in amended claim 1. The message connector of Courant is a tool which allows a user to automatically listen for events from other tools and respond to those events by requesting user specified functionality from other tools. *See* Col. 4, lines 50-53. The message connector of Courant automatically requests user specified tools as soon as specified events occur. In Courant, there is no **condition associated with the at least one input signal of the executable graphical post component is satisfied**.

Accordingly, the combination of Wang and Courant fails to disclose or suggest **executable graphical post component having at least one input port for receiving at least one input signal, said executable graphical post component being configured to post an event when a condition associated with the at least one input signal of the executable graphical post component is satisfied**, as recited in claim 1. Kornerup fails to cure the shortcomings of Wang and Courant with respect to at least this claim feature.

### iii. The Kornerup Reference

As discussed during the interview, the Examiner applies Kornerup for the teaching of a time loop. As discussed above, Wang does not disclose or suggest *an executable graphical model including a plurality of executable time-based components*. Therefore, the time loop of Kornerup would have no effect on the clinical guideline of Wang. Combination of the timing loop of Kornerup and the graphical model of Wang would not result in an executable time-based component because the components of Wang merely indicate medical data, such as a first dosage administered to a patient. That information will be the same, for example, at time  $t=0$  and  $t=10$ .

Furthermore, the Examiner cites to hardware components illustrated in Kornerup for the teaching of executable time-based components. *See* Office Action, page 4. The sections of

Kornerup cited by the Examiner recite a system clock provided by a PC computer system, a timer of RIO hardware boards, internal countdown registers of the processor of the computer system, etc. Applicants respectfully submit that these are all hardware components that are different than *executable time-based graphical components*, as recited in Applicants' claim 1.

Furthermore, there is no disclosure in Kornerup of an **executable graphical post component having at least one input port for receiving at least one input signal, said executable graphical post component being configured to post an event when a condition associated with the at least one input signal of the executable graphical post component is satisfied**.

Therefore a combination of Wang, Courant and Kornerup fails to disclose or suggest **executable graphical post component having at least one input port for receiving at least one input signal, said executable graphical post component being configured to post an event when a condition associated with the at least one input signal of the executable graphical post component is satisfied**, as recited in Applicants' claim 1.

B. *Executing at least one executable time-based component:*

The combination of Wang, Courant and Kornerup fails to disclose or suggest other features of claim 1. For example, the combination of Wang, Courant and Kornerup fails to disclose or suggest **executing at least one executable time-based component from said plurality of executable time-based components in response to said notifying as opposed to in response to a time trigger**, as recited in amended claim 1.

Even though a timing loop is applied to Wang and Courant, as suggested by the Examiner, the resulting combination would not provide **executing at least one executable time-based component from said plurality of executable time-based components in response to said notifying as opposed to in response to a time trigger**, as recited in Applicants' claim 1. Claim 1 concerns executing time-based components based on occurrence of events. Thus, a time-based component is executed not in response to a time trigger but in response to the occurrence of an event.

Accordingly, for at least these reasons, Wang, Courant and Kornerup, alone or in any reasonable combination, do not disclose or suggest the elements of claim 1. Applicants respectfully requests allowance of claim 1. Furthermore, since claims 2-18 are dependent upon claim 1, the cited references also fail to disclose or suggest the elements of dependent claims 2-18. Applicants respectfully request the allowance of claims 2-18.

Claim 33 is a medium claim corresponding to claim 1 and Applicants submit that claim 33 is allowable for at least the reasons discussed for claim 1. Claims 34-50 are dependent upon claim 33, and Applicants therefore submit that the cited references also fail to disclose or suggest the elements of dependent claims 34-50. Applicants request the allowance of claims 34-50.

## 2. Claims 19-30 and 51-61

Claim 19 recites:

“A method for controlling model execution in a modeling environment, the method comprising:

displaying a view of an executable model with a plurality of executable time-based components, **the model including at least one user-configurable, executable graphical post component having at least one input port for receiving at least one input signal, the graphical post component being configured to post an event when a condition associated with the at least one input signal of the executable graphical post component is satisfied;**

identifying when said condition is satisfied during the execution of said executable model;

posting, using the executable post component, said notice of an occurrence of said event in said modeling environment to an event handler, said posting notifying said event handler of said occurrence of said event;

interrupting execution of an executing event in response to the determination of the occurrence of said specified event; and

performing an operation in said executable model in response to the determination of the occurrence of the specified event.”

The combination of Wang in view of Courant in further view of Kornerup fails to disclose or suggest all of the elements of claim 19. More specifically, the cited combination of references fails to disclose or suggest **a user-configurable, executable graphical post component having at least one input port for receiving at least one input signal, the graphical post component being configured to post an event when a condition associated with the at least one input signal of the executable graphical post component is satisfied.**

Applicants respectfully submit that the discussion regarding claim 1 is equally applicable to claim 19.

Accordingly, for at least these reasons, since Wang, Courant and Kornerup, alone or in any reasonable combination, does not disclose or suggest all of the elements of claim 19, Applicants request the allowance of claim 19. Furthermore, since claims 20-29 are dependent upon claim 19, the cited references also fail to disclose or suggest the elements of dependent claims 20-29 and Applicants request the allowance of claims 20-29.

Claim 51 is a medium claim corresponding to claim 19 and Applicants submit that claim 51 is allowable for at least the reasons discussed for claim 19. Claims 52-61 are dependent upon claim 51, and Applicants therefore submit that the cited references also fail to disclose or suggest the elements of dependent claims 52-61. Applicants request the allowance of claims 52-61.

**CONCLUSION**

In view of the above amendment, Applicants believe the pending application is in condition for allowance. Should the Examiner feel that a teleconference would expedite the prosecution of this application, the Examiner is urged to contact the Applicants' attorney at (617) 227-7400.

Please charge any shortage or credit any overpayment of fees to our Deposit Account No. 12-0080, under Order No. MWS-056RCE. In the event that a petition for an extension of time is required to be submitted herewith, and the requisite petition does not accompany this response, the undersigned hereby petitions under 37 C.F.R. §1.136(a) for an extension of time for as many months as are required to render this submission timely. Any fee due is authorized to be charged to the aforementioned Deposit Account.

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Respectfully submitted,

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